

COUNTY OF SHASTA

2008 WMA Base Funding Work Plan

Member of the Shasta County WMA

Sesbania punicea Eradication Project

January 1, 2009 – December 31, 2009

Contract Lead Person

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Project Goal:

To continue eradication of Rattlebox (*Sesbania punicea*) in Shasta County; rehabilitating natural watercourses and stopping sources of reinfestation to areas along the Sacramento River. The regional map (Fig.1) emphasizes the strategic importance of eradicating these most northerly populations. Without removal of these plants, efforts farther down the watershed will be undermined by propagative material continually floating downriver. The area prioritized for treatment includes Churn Creek, from its headwaters to the Sacramento River (Fig.2-3). The plan also includes follow-up treatment of the banks of Rother Pond, a 33-acre body of water adjacent to residential areas and Riverview Golf Course in the city of Redding.

Background:

Sesbania punicea was first brought to the attention of the Shasta County WMA in 2000, when a 1/8-mile long stretch of the plant was observed along Hwy 273 in Redding. Follow-up research revealed that the plant was a growing concern in the American River delta and areas along the Sacramento River and had become a serious threat to other areas in California. As a result, Shasta County Department of Agriculture staff removed the Hwy 273 population by hand pulling in fall 2001 and follow-up has kept the area clean. In spring 2002, plants were also removed from Riverview Country Club in Redding, where water flows seasonally into the Sacramento River. Contributions by project partners totaled over \$2,400.00 between the 2001-2002 season. Shortly afterward, reports and surveys showed the plant to be rapidly expanding along the entire length of Churn Creek and around several areas of standing water in and near Redding. In 2003, approximately 1.5 acres of the most densely infested area of Churn Creek, behind a children's park known as "Kid's Kingdom", was cut and hand-pulled. Outlier infestations were also removed, including a depression along Clear Creek Rd., a few individual plants near Lake Boulevard, and scattered plants along the Sacramento River Trail in Redding. Contributions by project partners totaled over \$3,000.00 during the 2003-2004 season.

In 2007 and 2008, California Department of Fire crews were utilized to cut, pile, and burn the plant from around the perimeter of Rother Ponds and a section of Churn Creek behind Kids Kingdom, Redding. The work was completed also in cooperation with California Fish & Game, Shasta County Probation, City of Redding, Riverview Country Club and the Rother family.

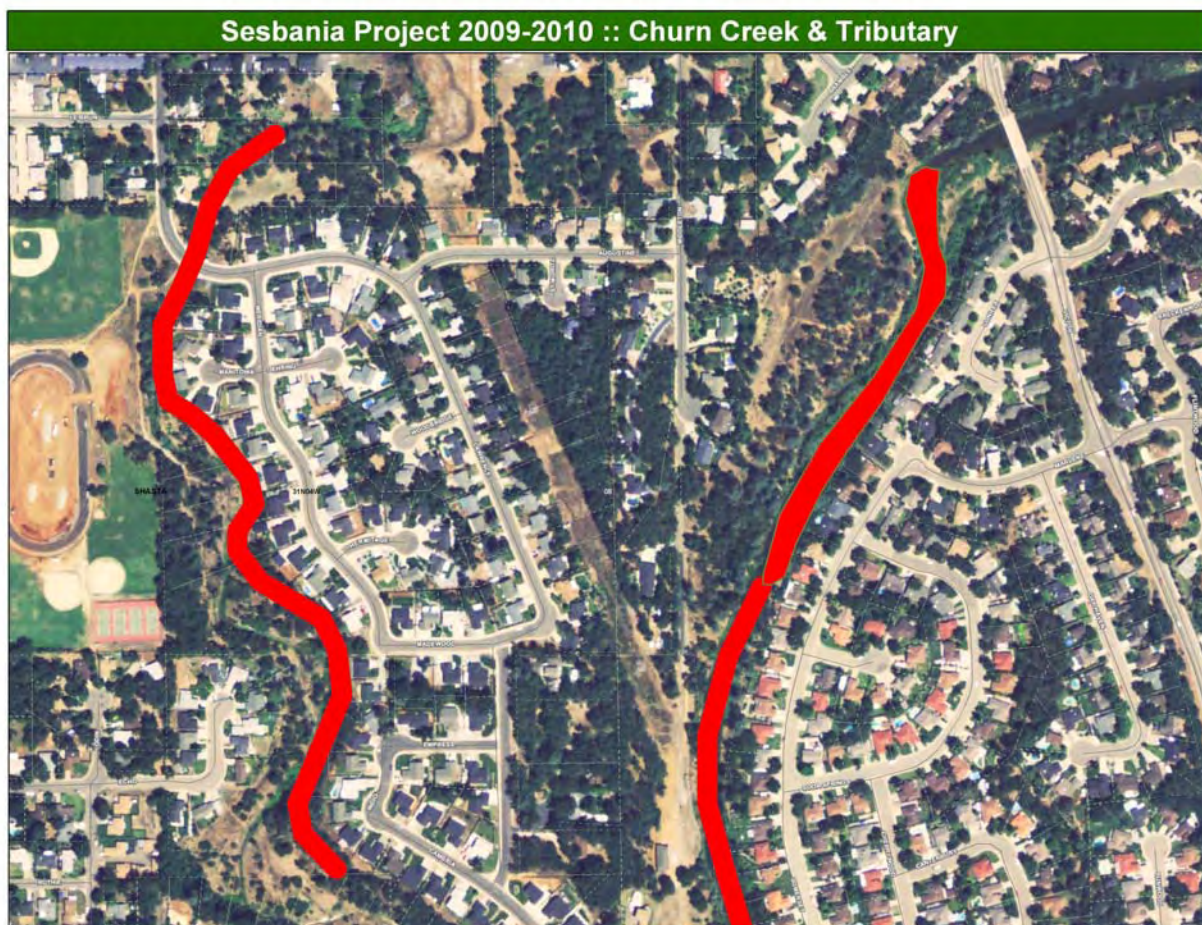
How will this directly or indirectly benefit the environment, wildlife, and other areas:

The Churn Creek infestation listed in this proposal, if left unchecked, would surely become denser, crowding out native plants and changing a natural habitat which supports many species of birds, fish, and other wildlife. Riverview Country Club and Churn Creek both empty into the Sacramento River, annually distributing viable seed to all areas of the river south of Shasta County. Efforts to eradicate *Sesbania punicea* in those areas will be compromised if the source of seed is not removed.

Although the 07-08 project removed most of the biomass from the Rother Pond area, resprouts must be treated in order to maintain a clear shoreline.

Priority Area Being Addressed:

This proposal prioritizes removing the infestation along the banks of Churn Creek; beginning at the northernmost population and continuing south to the Sacramento River. Of particular focus is to continue removal behind Kids Kingdom, from the Victor Avenue bridge to the stopping point of the 07-08 project. Also in this area is a tributary to Churn Creek in which the plant has reached an alarming density. The plan includes removal and burning of *Sesbania* in this area as well (see below).



The plan also includes follow-up chemical treatment of seedlings along the banks of Rother Pond, a 33-acre body of water adjacent to residential areas and Riverview Golf Course in the city of Redding.

Project Objectives and Methods:

1). SURVEY & MAPPING – Survey for the project areas was completed by the Shasta County Department of Agriculture during the 07-08 project. A follow-up survey is planned during the new project to reassess the infestation south of Kids Kingdom to the confluence of Churn Creek and the Sacramento River.

2). ERADICATION PROJECTS – The sites will be treated at the proper time, with the proper steps, and the appropriate IPM method. Initial attack will involve cutting and treating the stump base with herbicide, and removing and destroying the stems, roots, foliage, and pods. This step will take place in September and October of 2009. Follow-up will begin in the summer of 2010, when creek water levels once again go down, and will include pulling and herbicide treatment of resprouts and seedlings. For areas that were not addressed in 2009, this phase will also include cutting and treating the stump base with herbicide, removing and destroying the stems, roots, foliage, and pods as before. Final approach under this contract will happen in spring and summer 2010, to once again pull and treat resprouts and seedlings.

Churn Creek	(T30N, R04W Secs.3, 4, and 10; T31N, R04W, Secs.8, 11, 20, 21, 28, 33, and 34) A heavy creek bank infestation still remains within section 8. Similar to above, the process will begin with land-based removal of biomass by CDF crews. Chemical treatment to the cut stumps by Shasta County Department of Agriculture personnel will immediately follow. Biomass will be destroyed by fire when permit and weather conditions allow.
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Rother Pond	(T31N, R04W, Sec.7) As the biomass was removed and the resprouts and most of the seedlings were treated during the 07-08 project, the new approach will be to spray sprouting seeds that have laid dormant.
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BUDGET

Shasta County WMA *Sesbania punicea* Eradication Project 2009

“Subject to change due to salary and benefit modifications, available work force, labor contract changes, program modifications, etc.”

Personnel Services	1/1/09- 12/31-09	In-kind 2009				
<i>Eradication</i>						
CDF Crew - 18 Days X \$225.00/day	\$4,050					
Seasonal, Crewperson - 64 hrs. X \$10.75/hr	\$688					
Seasonal, Crewperson - 64 hrs. X \$10.75/hr		\$688				
Permanent, Program Assistant - 64 hrs. X \$27.88/hr	\$1,784					
Permanent, Program Assistant - 64 hrs. X \$27.88/hr		\$1,784				
Permanent, Program Associate - 24 hrs. X \$35.58/hr	\$854					
Permanent, Program Associate- 24 hrs. X \$35.58/hr		\$854				
<i>Coordination, Mapping, Reporting</i>						
Permanent Staff, Ag Investigator – 16 hrs X \$41.78/hr	\$668					
Permanent Staff, Ag Investigator – 32 hrs X \$41.78/hr		\$1,337				
Permanent Staff, Agency Staff Analyst 10 hrs X \$39.41/hr		\$394				
Permanent Staff, Deputy Comm 10 hrs X \$61.56/hr		\$616				
Subtotal Personnel Services	\$8,044	\$5,673				
Operating Expenses						
Miscellaneous Supplies (Equip) = \$200		\$200				
Operations Supplies (various herbicides ¹) = \$300		\$300				
Vehicle Mileage – FY 2009/2010 (200 mi. at \$0.585/mi.)	\$117					
Subtotal Operating Expenses	\$117	\$500				
Subtotal	\$8,161	\$6,173				
Indirect Costs = \$5,259		\$5,259				
Totals	\$8,161	\$11,432				

Total Grant Request (in-kind not included here): **\$8,161**

Total In-Kind (all years): **\$11,432**

GRAND TOTAL (all columns): **\$19,593**

Fig.1 :: Overview

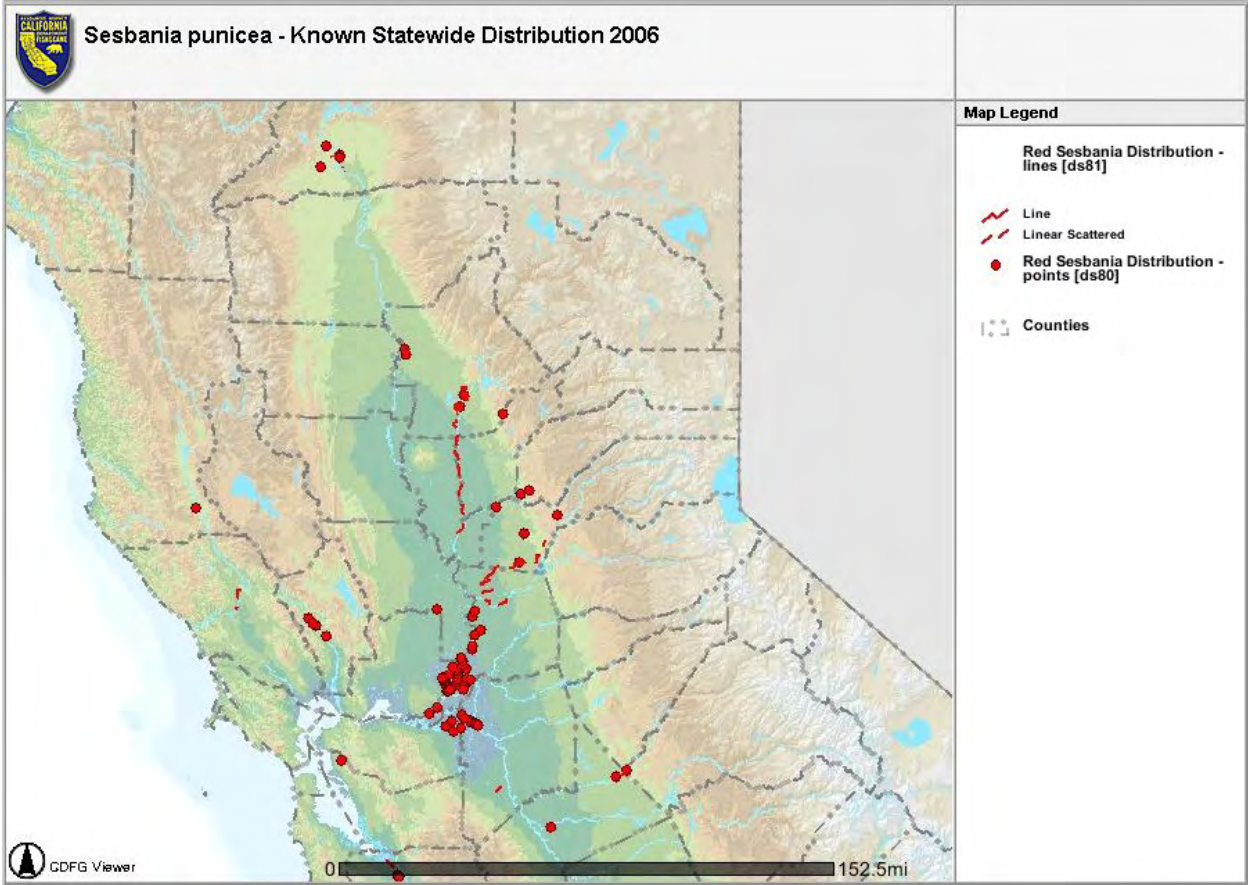


Fig.2 :: Overview

Overview of Shasta County Sesbania punicea Infestation - 2006

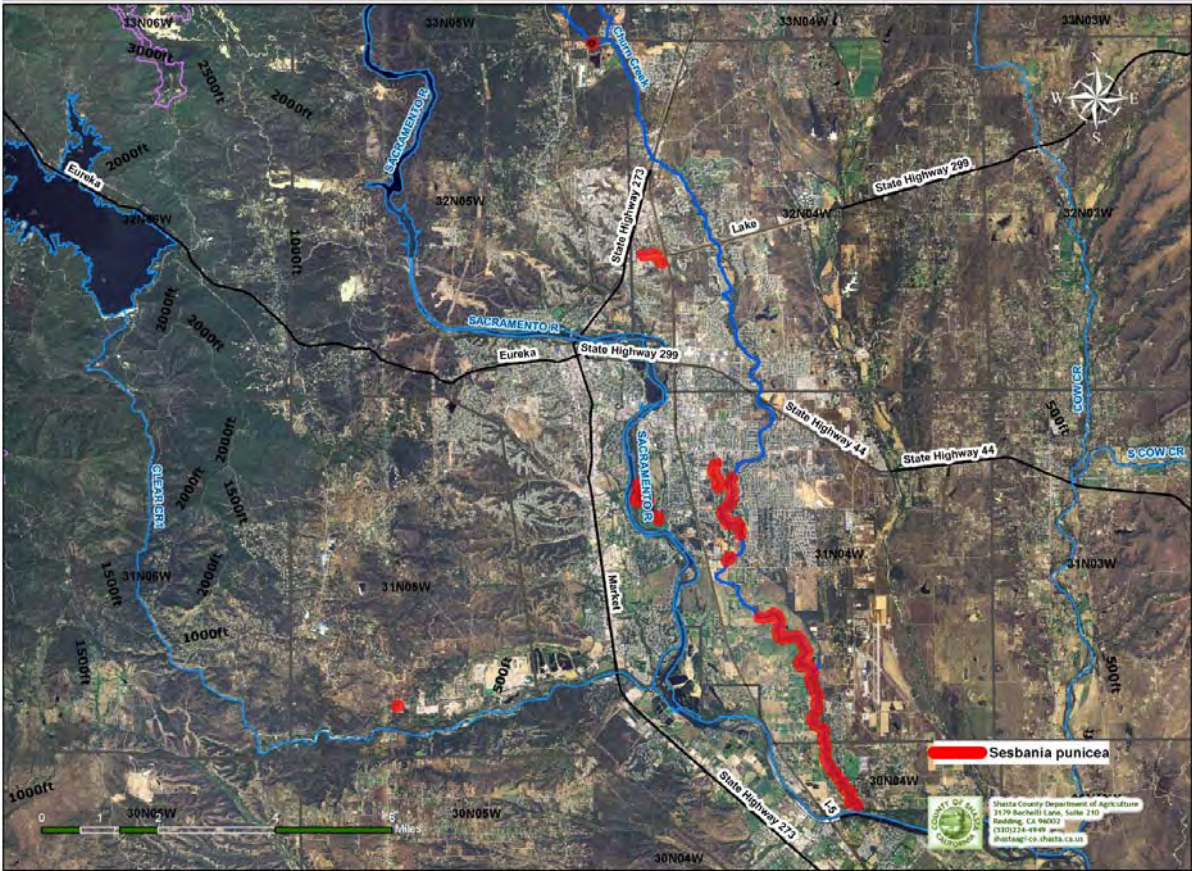


Fig.3 :: Rother Pond



Fig.4 :: Hwy273 Project



Before



After

Fig.5 :: Churn Creek, Kid's Kingdom Project



Before



After